

## A CASE OF OBSTRUCTIVE HYPERTROPHY OF THE PROSTATE TREATED BY CASTRATION.<sup>1</sup>

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ON October 25, 1893, a patient, sixty-nine years of age, was admitted to Alicia Hospital, St. Augustine, who had suffered for a year with mild symptoms of prostatic hypertrophy. During the month previous to his admission increasing symptoms of obstruction had set in. During the seven and one-half weeks after admission he suffered with irregular fevers, urination was painful and frequent, especially at night, and the urine was loaded with the products of decomposition and pus. Retention attacks were frequent and the smallest amount of residual urine was six ounces.

From October 25 until January 17, 1894, the usual and approved treatment, internally and by bladder douches, was carefully conducted by Drs. L. Alexander, A. Anderson, and myself. During this period the patient steadily declined.

The depletion of repeated acute cystitic attacks, accompanied at each recurrence by excess of pus and septic fever, the harassing constancy of desire and the necessary loss of appetite and sleep, with the other effects of the local disease, reduced his weight during these seven and one-half weeks from 165 to 135 pounds. His weakness was alarming; all unfavorable symptoms were increasing.

During Christmas week, Dr. J. William White, of Philadelphia, saw the patient with me and called my attention to his suggestion made in June, 1893, at the meeting of the American Surgical Association, in regard to the possible advantages of castration in hypertrophied prostate.

I accordingly determined, with the consent of the patient and his family, to treat the case in that manner. The operation was performed aseptically on January 17.

<sup>1</sup> White's operation: orchectomy for hypertrophy of the prostate. Read before the Genito-Urinary Section of the New York Academy of Medicine.

During the week following operation the patient was catheterized twice daily; at the end of that period he attempted and successfully voided his urine, and the catheter was used twice each week, alone for the purpose of determining the quantity of residual urine.

No local treatment was employed subsequent to operation.

On March 1, six weeks after operation, the patient was discharged.

His general conditions were changed, in that he had subsequent to castration no fever from any source, appetite returned, weight increased from 135 to 163 pounds, mental state, previously weak and melancholic, made decided improvement.

His local conditions changed in that, instead of retention or residual urine of not less than six ounces, he had no retention attack or return of acute cystitis, and the residual quantity, steadily diminishing, during the final week varied between three drachms and one and a half drachms.

The nocturnal desire for urination was reduced from twelve and fifteen to four and six times.

The urine now presented a sediment only on standing for hours, which contained, under the microscope, a moderate number of pus-cells.

A brother of the patient, living at San Mateo, Fla., writes under date of May 2, 1894, fifteen weeks after the operation, that the patient had a few days before gone northward, that his weight was 180 pounds, and adds, "as to his water, he told me that he had no trouble at all and no pain from that source."

Dr. J. William White<sup>1</sup> first suggested the operation of castration as of possible advantage. His analogies and the results of experiments which he caused to be instituted upon dogs so find their complement in the results in the above case that I venture to offer some of them in condensed form.

The pathology of hypertrophied prostate is the same as that of fibromyoma. The results of oöphorectomy for this tumor in the female by virtue of lowered blood- and nerve-supply are successful. The tumor atrophies and its obstructive presence is reduced to quiescence and harmlessness. The pathological analogy suggests analogous treatment.

<sup>1</sup> Surgery of the Hypertrophied Prostate, *ANNALS OF SURGERY*, 1893, Vol. XVIII, p. 152.

Griffiths, quoted by White, notes the observation of John Hunter, that in males the prostate gland in winter was hardly discernible, but in the spring it becomes very large and filled with mucus. The same is true of the hedgehog during the season of rut. Hunter also says that while the prostate of a perfect bull is soft and bulky, that of the castrated animal is small, flabby, tough, and ligamentous. Observations of Griffiths on cats and dogs, castrated some years since, "show the prostate a mass of fibrous connective tissue, containing the remains of the once active gland tubules with a small number of atrophied muscle-fibres." Like changes he notes in the sheep, bullock, pig, and horse. Pelican, quoted by White, in a book referring to the Russian eunuchs, says that the prostates of eunuchs are about the size of those of children. Civiale and Gruber each note practical disappearance of the prostate in a man castrated in early life.

The advantages of this operation, were it to prove successful, are the thorough reduction of the mass in every dimension, reduction of blood- and nerve-supply of gland and bladder walls, continuous improvement as gland retrogression continues, and impossibility of relapse. Its freedom from danger recommends it in a class of cases most unfitted by the infirmity of age and a harassing disease to undergo a surgical strain of any moment.

Perineal prostatectomy has a mortality of 13.6 per cent. and suprapubic prostatectomy of 25 per cent. The button-hole operation frequently relieves, to a greater or less extent, but is accompanied by its fistula and fails in thoroughness. Electricity has only occasional usefulness.

White's experiments upon dogs are,—viz.:

The average weight of thirty-five prostates of dogs was found to be 15.4 grammes.

Seventeen days after castration a dog was killed. The weight of his prostate was 5.4 grammes; no structural change appeared microscopically. A dog whose average weight gave a prostate of 13 grammes, was killed thirty-one days after castration. Weight of gland, 5.7 grammes, beginning structural change in glandular structure. A dog killed in thirty days after operation presented a gland weighing 2.6 grammes. A

dog whose weight represented a normal gland of 19 grammes, thirty-two days after operation presented a gland 2.6 grammes in weight. A dog whose weight represented a gland of 14 grammes, in forty-one days after operation presented one of 5.7 grammes, with muscle fibres atrophied. A dog whose weight represented a gland of 30 grammes, fifty-four days after operation presented one of 4.4 grammes, connective tissue predominating. A dog killed in sixty days showed a gland of 1.5 grammes. A dog whose weight represented 21 grammes, killed in sixty-one days, presented a gland of 4.4 grammes. A dog whose weight represented a gland of 21 grammes, in 150 days after operation showed one of 4.5 grammes. A dog killed seventy-two days after operation presented a gland of 3.9 grammes. Little glandular structure remained.

The status of castration, as a treatment of one of the most dangerous and obstinate of the diseases of men of advancing years, will be determined only by the results of more numerous operations.

This paper is intended as a contribution to the present knowledge on the subject.